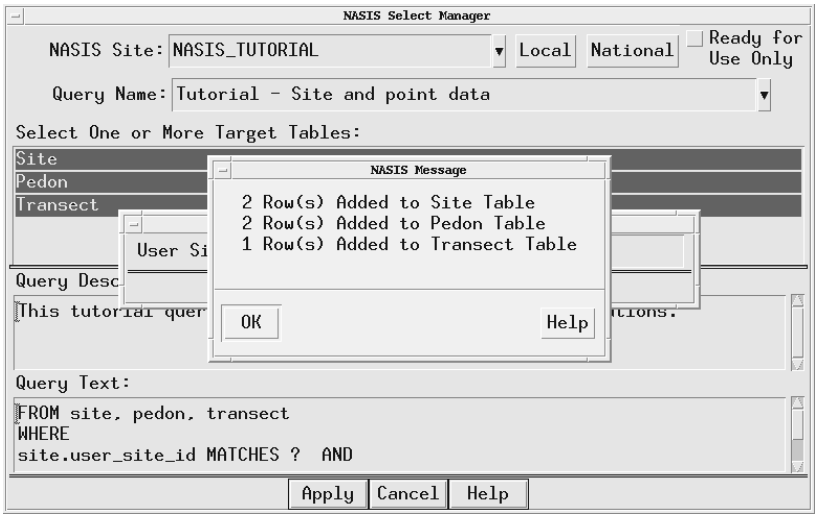
Chapter 19 Managing the Site and Point Data

This lesson begins with a transect that currently has two associated sites. The lesson describes the process of defining a new site, adding a pedon to the site, linking the site to a mapunit, and associating the new site to the two sites and to the transect.

Viewing the Existing Transect

The tutorial database contains two sites. You are going to add another site and pedon. In NASIS 4.1, each of the sites represented a transect stop; you grouped them in a Site Association to define the full transect. In NASIS 5.0 the organization of sites, pedons, transects, and site associations changed. Transects are a specialized grouping. Transect stops are now defined in the Pedon table and are linked to site observations for specific dates. The Transect table and Transect Text table describe only the transect, not the transect stops associated with transect. Associations are made in the Pedon table and described later.

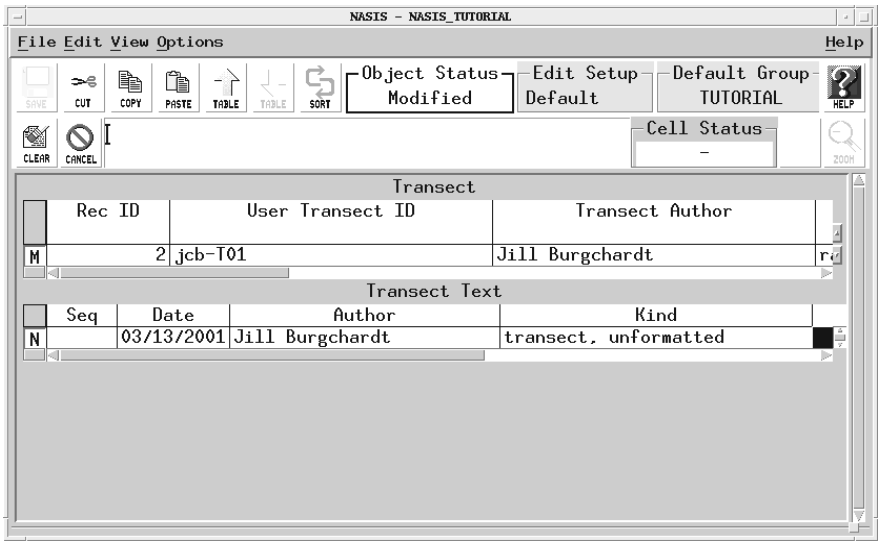
1. If you are continuing from Chapter 18, skip to step 6.
2. On the **File** menu, choose **New**. If you receive a message that data has been modified, click **OK**.
3. On the **File** menu, choose **Select**, then select the **Tutorial – Site and point data** query from the Query name list.
4. Highlight the site, pedon, and transect tables in the target table list. Click **Apply**.
5. In the Query Parameters box, type ***** in the **User Site ID** matches box, and click **Apply**.



Note: The message box will indicate that two rows were added to the Site table, two rows were added to the Pedon table, and one row was added to the Transect

table. Click **OK** to close the message box, then click **Cancel** to close the parameters dialog and **Cancel** again to close the Select Manager dialog.

6. On the **View** Menu, click **Transects**, then **Transect Text**.



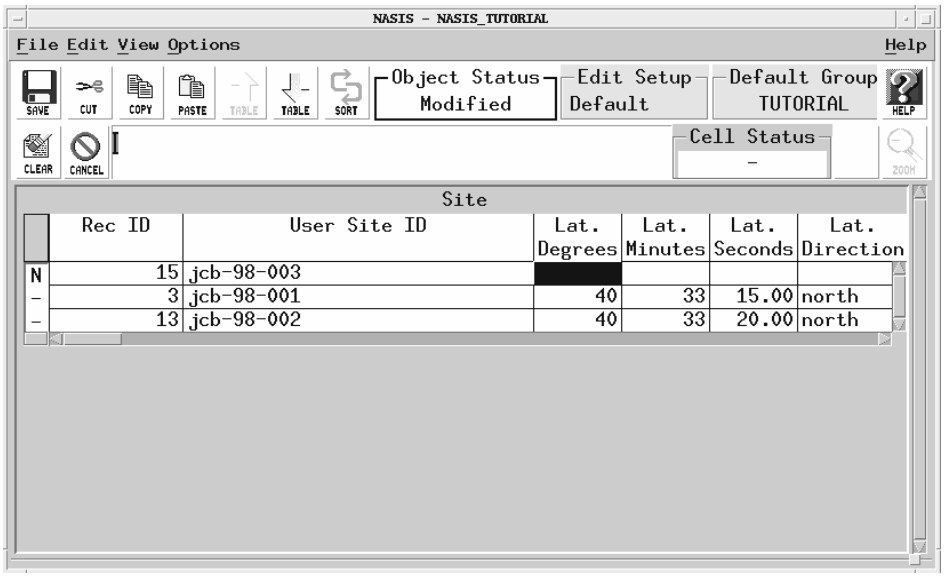
Note: Both the Transect and Transect Text tables are displayed.

7. With the cursor positioned in the Transect table scroll to the right. Observe that association detail is not located here.

Defining a New Site

Note: In NASIS, you must first enter a site if one does not already exist that you wish to use. You then record a site observation record that includes the date of the observation. A pedon record can then be created in the Pedon table. You are required to link the pedon record to a site and a site observation record.

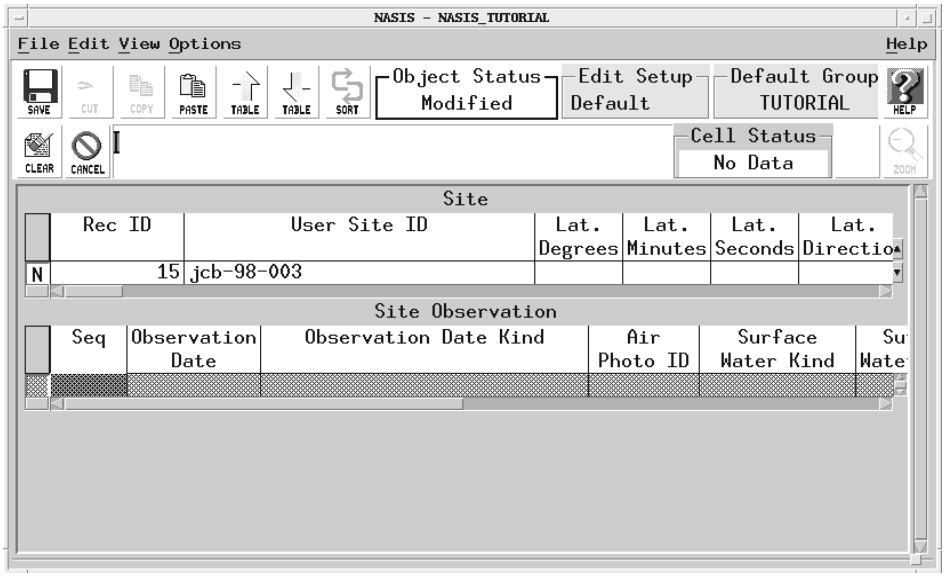
1. **View** menu, click **Sites**, then click **Site.**
2. Click **F8** to create a new row.
3. Tab to the **User Site ID**, type **jcb-98-003.**



Note: The columns on the site screen request information found on the Pedon 232 form. If you prefer, you may enter a typical user site ID that would be used on your project. However, all of the screen examples and instructions will use the jcb-98-003 ID.

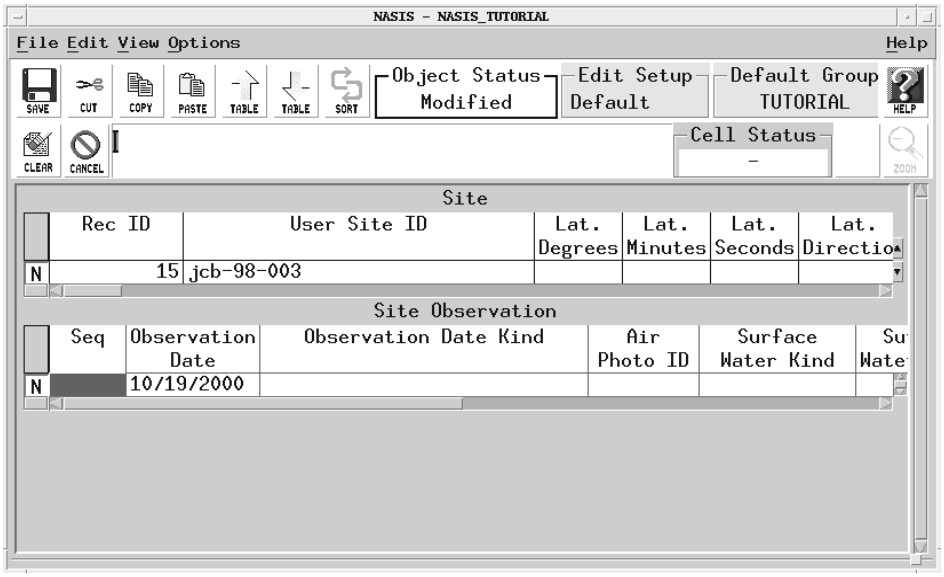
4. Tab across the screen entering physical location characteristics, such as latitude and longitude, and public land survey information. Use similar values to those shown for jcb-98-001 and jcb-98-002. Not all columns need to be completed.

5. After completing site characteristics (with your cursor still in the new row), click **View, Site Observations, Site Observation**.



Note: You must select the Site Observation table from the menu, because a previous lesson changed your default table path.

6. Click **F8** to open a row on the Site Observation table, then tab to the Observation Date field.

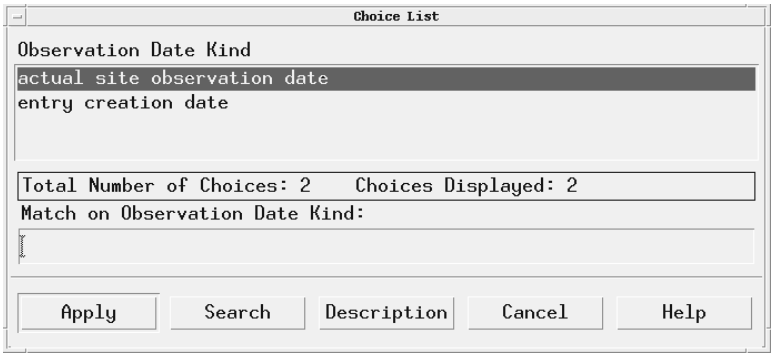


Note: The Observation Date defaults to the current date.

7. Enter **9/1/1998** in the Observation Date. Tab to the **Observation Date Kind** field.

   Note: It is not necessary to enter leading zeros before the month and day (09 or 01), however, the full year (1998) must be entered.

8. Click the **Choice** button, highlight **actual site observation date**, then click **Apply**.



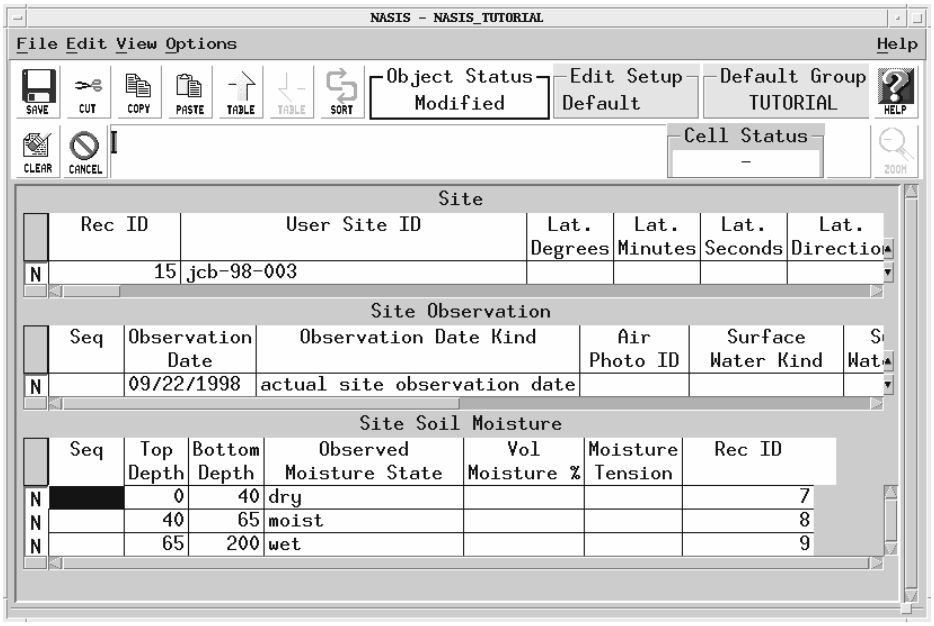
9. Tab across the row, entering data for values as appropriate.

   Note: Before leaving the Site Observation table, scroll to the far right and notice the Rec ID of your new observation. If there are multiple observations on a single date, the Rec ID number can help you select a specific observation from a choice list later.

10. Click the **Down Table** button to view the Site Soil Moisture table.

11. Press **F8** to open a row, then complete the **Top Depth**, **Bottom Depth**, and **Moisture Status** as shown in the next figure.

Note: A single site may have several observations and each observation may have multiple entries in its Site Soil Moisture table and other child tables. You must press F8 to open each new row that you add.



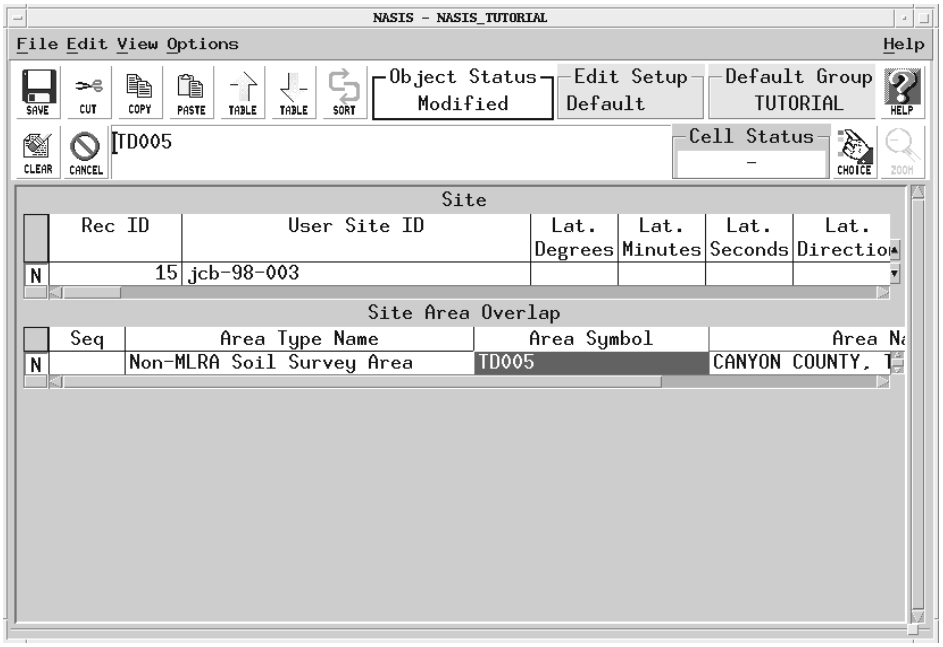
Note: The Site object contains several other tables, which might need to be edited for an actual situation. On the **View** menu, click **Sites**, then click **Site**, and review the other tables.

Establishing a Site Area Overlap

1. On the **View** menu, select **Site**, then click **Site Area Overlap**.

2. Click **F8** to open a new row, then position your cursor in the **Area Type** column.
3. Click the **Choice** button.

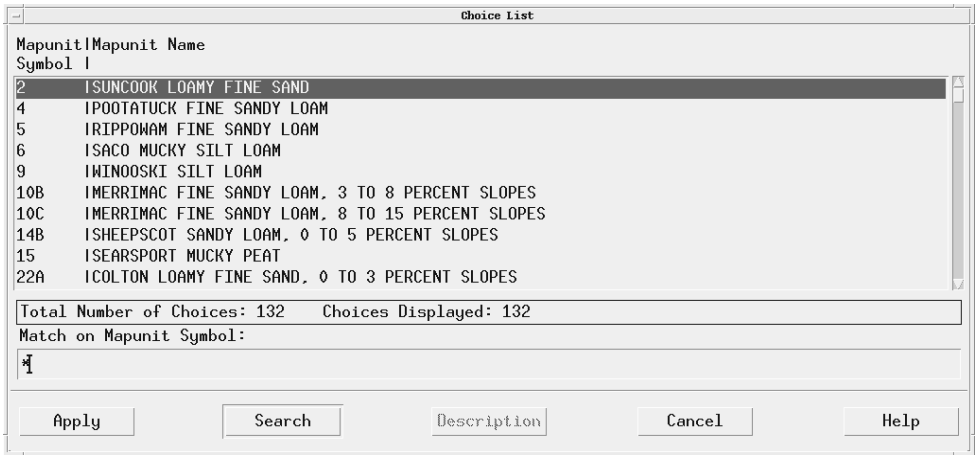
   Note: When the choice list appears, it indicates 0 choices. Choice lists display selections in your local database, in this case the NASIS_TUTORIAL database. Area Types are not owned by the tutorial database, so they do not appear when you first select the Choice List dialog.
4. Click the **National** button, then highlight **Non-MLRA Soil Survey Area**.
5. Click **Apply**.
6. In the **Area Symbol** field, click **Choice** button again. This time you will see the list of Non-MLRA Soil Survey Areas in the tutorial database. Select **TD005**. The Site you created is now associated with area TD005.
   Note: When creating overlaps for a real site it is recommended that overlaps be created for the following area types at a minimum—state or territory, county or parish, MLRA, and soil survey area. Others may be created as desired or needed.



Linking a Site to a Mapunit

1. Starting with your cursor in the Non-MLRA Soil Survey Area row in the Site Overlap table, click the Down table button. The Site Mapunit Overlap table opens.
2. Click **F8**, then position the cursor in the **Legend ID** column.
3. Click the **Choice** button.
   Note: If multiple legends are linked to the Area listed in the Site Area Overlap table, they will all be displayed in the choice list dialog.
4. Highlight legend **1**.

5. Click **Apply**.
6. Position the cursor in the **Mapunit Symbol** column.
7. Click the **Choice** button.
   Note: There are 132 mapunit choices. Most user preferences are set to display fewer rows on choice lists. If none of the choices are displayed, you will have to do a search.
8. In the **Match on Mapunit Symbol** field type *****, then click **Search** to list the mapunits for the specified legend.

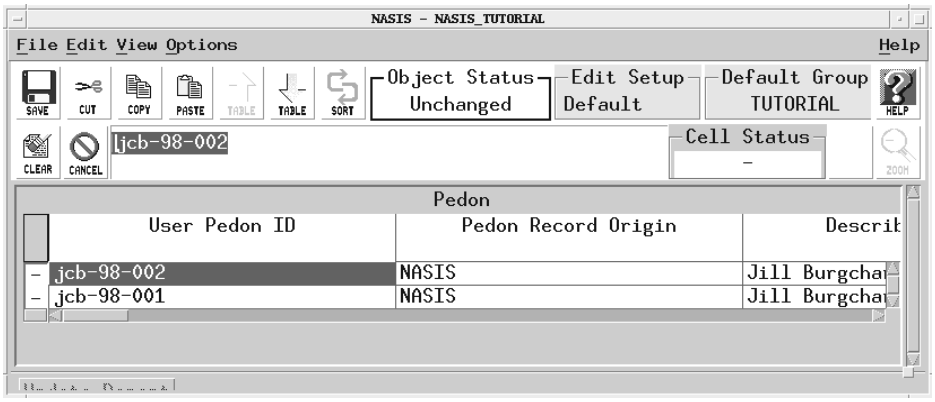


9. Highlight Mapunit **4, POOTATUCK FINE SANDY LOAM.**
10. Click **Apply**.

    Note: You've now created the site mapunit overlap, which indicates that this site is located within this mapunit.
11. With your cursor in the **Site Mapunit Overlap** table, click **File**, **Load Related**.
12. Click **Mapunit** to load the related mapunit.

Adding a Pedon

1. On the **View** menu, select **Pedons, Pedon**.



Note: The Pedon table is displayed.

2. Click **F8** to open a row.

   Note: The Pedon table contains information collected at the time a soil profile description is made. It has data that relates to the profile as a whole.

3. At the **User Site ID** column, click the **Choice** button, select User Site ID **jcb-98-003**, then click **Apply**.

4. At the **Site Observation ID** column, click the **Choice** button. Click **Apply**.

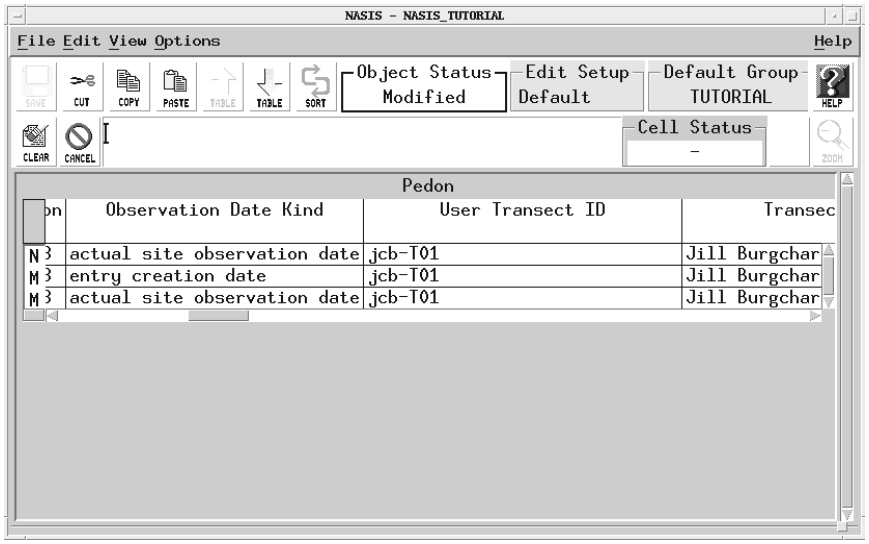
   Note: One observation appears on the Choice List. When entering actual data, you may have several observations on your list. Most detail for observations is contained in child tables of the Site Observation table, not in the Observation table itself. So, it may be difficult to recognize the observation you want from the columns displayed on the Choice List. If you need to refer back to the Observation table, note the Rec ID, it is unique to a single observation for this site.

5. Complete the remaining columns of the Pedon table. In particular, identify the User Transect ID.

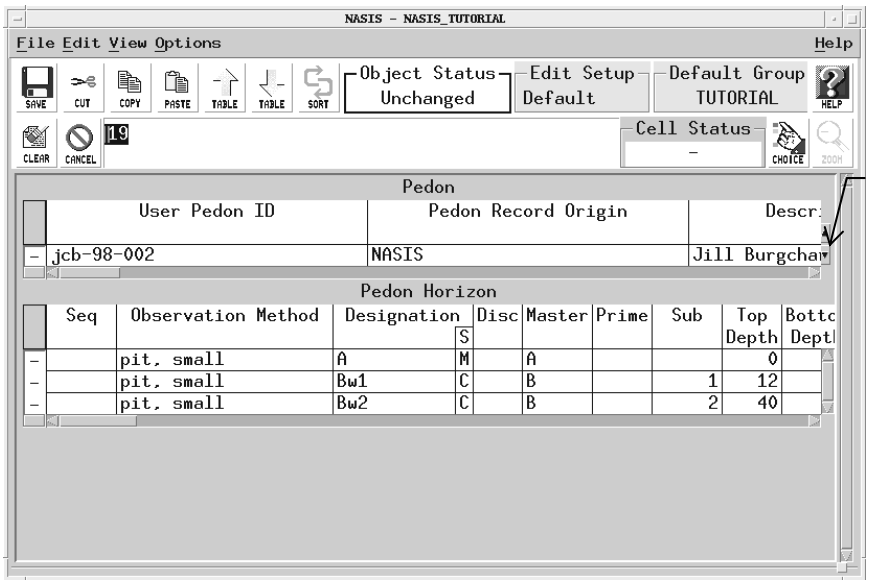
6. Click in the **User Transect ID** column.

7. Click the **Choice** button.

8. Select **jcb-T01**, then click **Apply**.

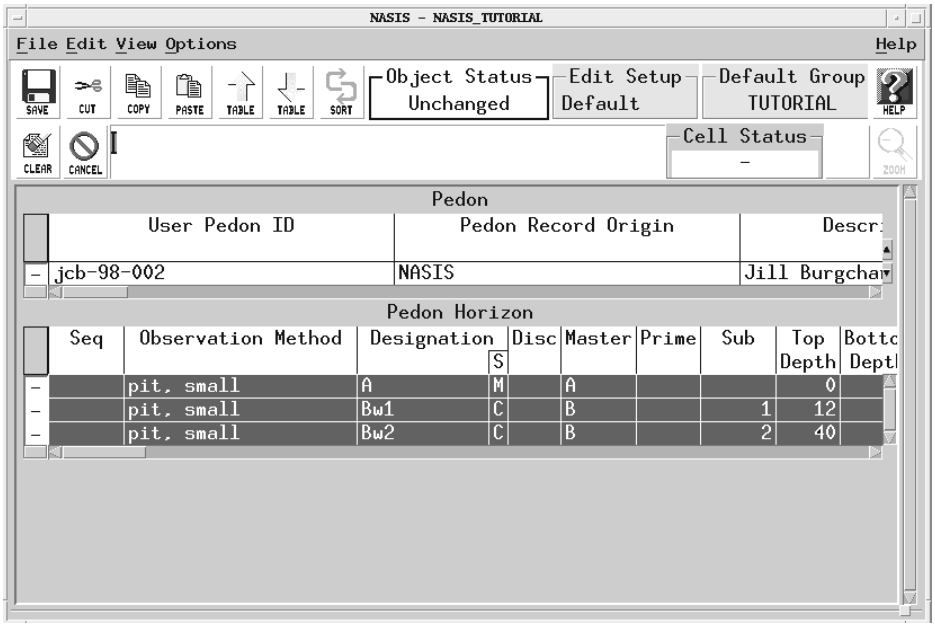


9. Click **Down table**.



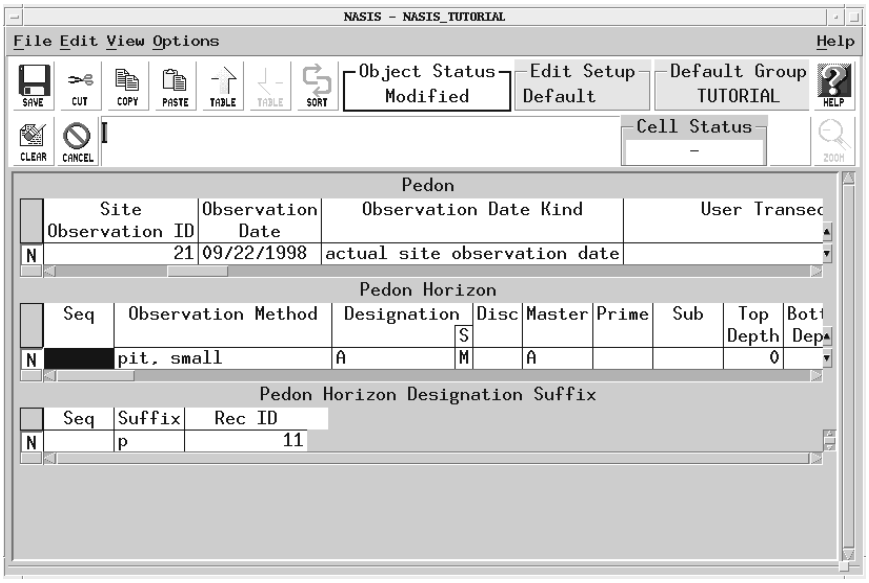
Note: The Pedon Horizon table is displayed.

10. Using the arrow on the Pedon table, locate **User Pedon ID jcb-98-002**.
11. Move your cursor to the **Pedon Horizon** table. The horizons for jcb-98-002 are similar to those for jcb-98-003, so you will copy them to your new Pedon Horizon and then edit them. Highlight all three rows, click **Copy**.



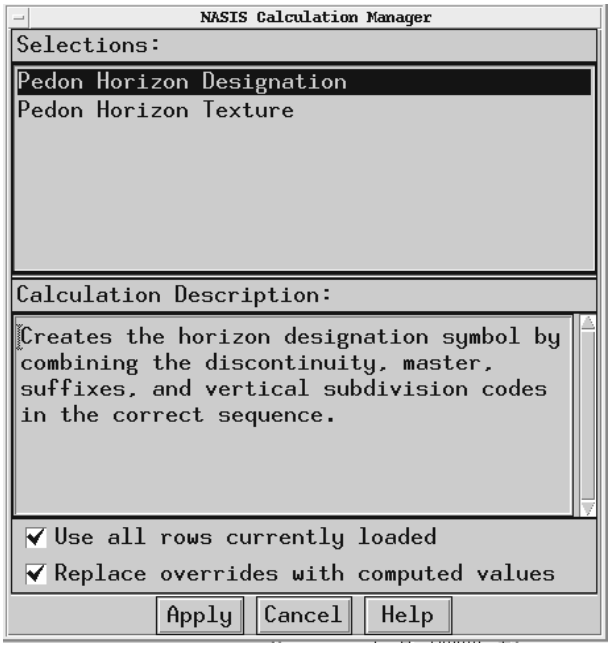
12. Use the arrow on the Pedon table to return to the pedon for User Pedon ID jcb-98-003.
13. Position your cursor in the Pedon Horizon table. Click **Paste**.
14. Position your cursor in the first row (A designation) of the Pedon Horizon table.
15. Modify some of the values shown in the **Disc**, **Master**, **Sub**, **Top Depth**, and **Bottom Depth** columns.

16. On the **View** menu, click **Pedon Horizons**, then click **Pedon Horizon Designation Suffix**.
17. Press **F8** to open a new row.



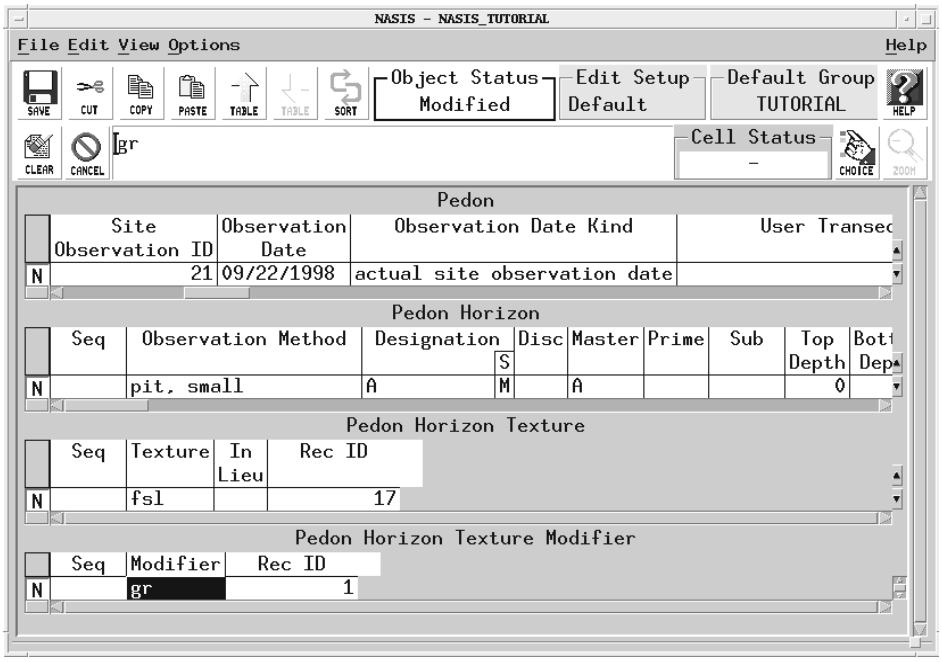
18. Enter **p** in the Suffix column (or select it from the choice list). This table must be completed before the Pedon Horizon Designation can be calculated.
19. Use the arrow on the Pedon Horizon table to display the **Bw1** and **Bw2** pedon horizon and pedon horizon suffix data. Just view these rows, no changes are necessary.
20. Position your cursor in the **Pedon Horizon** table.
21. On the **Options** menu, click **Calculate Data Elements**, then highlight **Pedon Horizon Designation**.
22. Check **Use all rows currently loaded** and **Replace overrides with computed values**, then click **Apply**. You should receive a message indicating that the calculation succeeded. Click **OK**.

    Note: By selecting the Use all rows currently loaded option, the calculation will update or re-calculate the Horizon Designation for all horizons currently loaded in the selected set. If this option is not selected, only the row in which your cursor is positioned, or those that are highlighted, will be calculated.



Note: The Pedon Horizon table has two calculated data elements, the Pedon Horizon Designation and the Pedon Horizon Texture. As with other NASIS calculations, they must be run individually. The Pedon Horizon Designation is calculated based on the elements just entered. The Pedon Horizon Texture is calculated based on the next two tables.

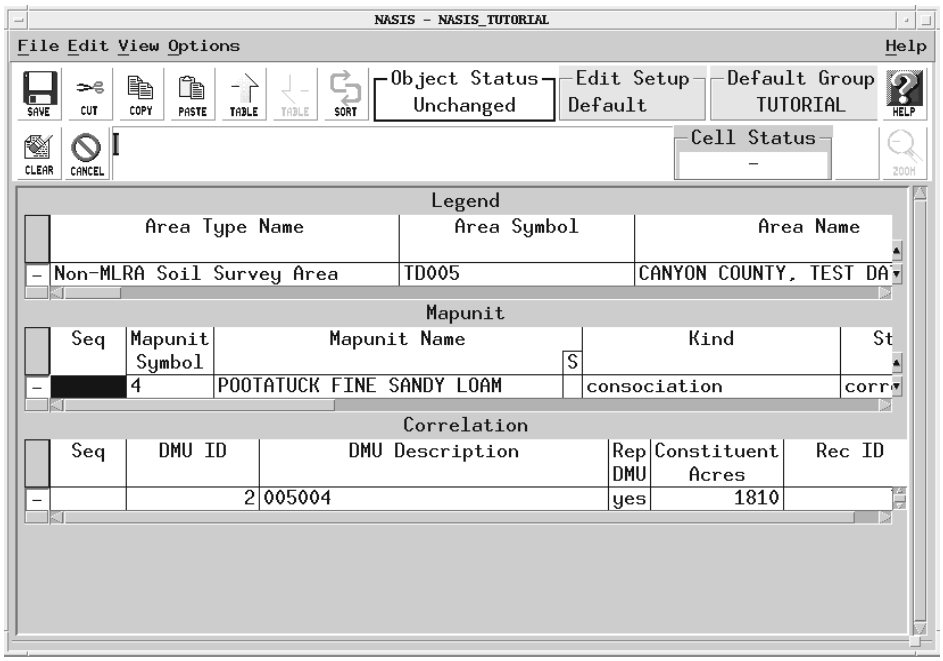
23. With your cursor in the A horizon row in the Pedon Horizon table, select the **View** menu, click **Pedon Horizons**, then click **Pedon Horizon Texture**.
24. Because you copied your pedon horizons from jcb-98-002, **fsl** should already be selected in the **Texture** column. If it is not, either type it or select **fsl** from the choice list.
25. Click the **Down Table** button to open the Modifier table, then press **F8**. It is not necessary to enter a modifier, unless it is appropriate for the pedon. The calculation does not require an entry in this field.
26. In the Modifier column, select the **Choice** list, then highlight **gr**, and then click **Apply**.



27. Click **Up Table** twice to return to the Pedon Horizon table.
28. On the **Options** menu, select **Calculate data elements**. This time **choose Pedon Horizon Texture**, click **Use all rows currently loaded**, then click **Apply**. You should receive a message indicating that the calculation succeeded. Click **OK**. The calculation is run on all horizons loaded.
29. Click **Up table** to return to the Pedon table.
30. On the **Options** menu, select **Calculate data elements**. This time you will see only one choice, **Pedon Taxonomic Classification**. Click **Apply**. You should receive a message indicating that the calculation succeeded. Click **OK**. This only calculates the current pedon row.

Linking a Pedon to a Component

1. On the **View** menu, select **Legends**, then click **Correlation**.
2. Highlight **DMU 005004**.



3. On the **File** menu, select **Load Related**, then click **Data Mapunit**.

   Note: A message indicates that one row was added to the Data Mapunit table. Click **OK**.

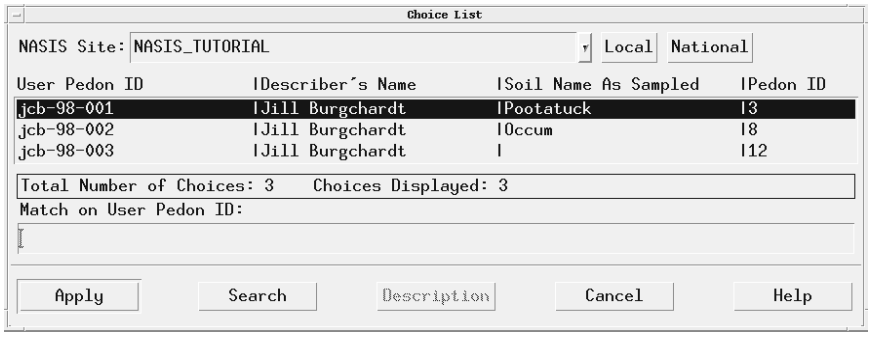
4. On the **View** menu, select **Components**, then click **Component**.

5. Click **POOTATUCK.**

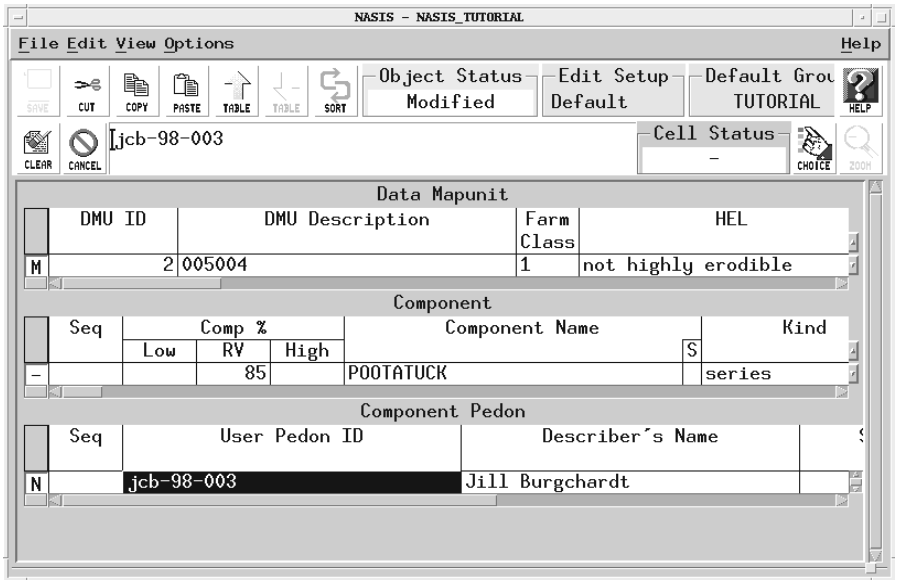
6. On the **View** menu, select **Components**, then click **Component Pedon.**

7. Click **F8** to insert row.

8. At the User Pedon ID field, click the **Choice** button.

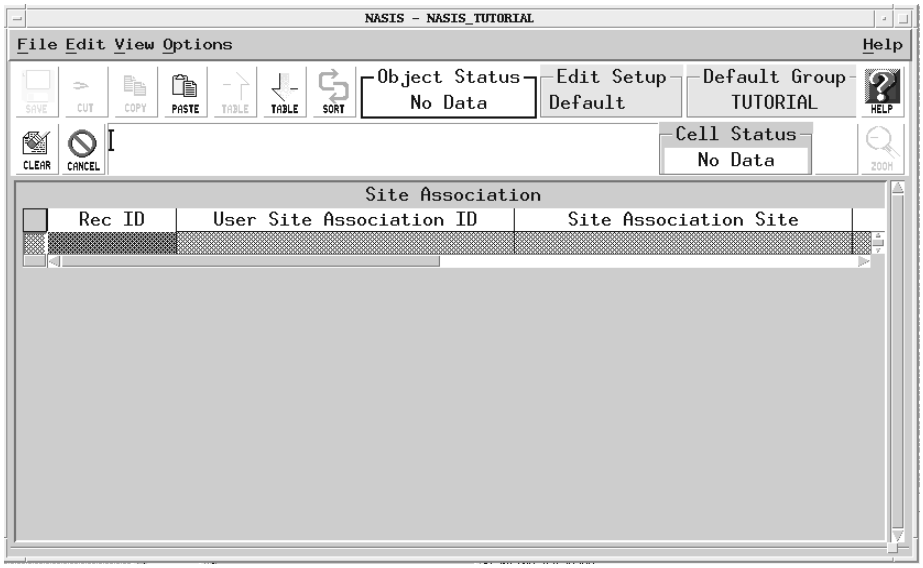


9. Highlight the Pedon Site ID **jcb-98-003**, then click **Apply**. The pedon you just entered is now linked to this Pootatuck component. You can also designate it as the Rep Pedon in the Component Pedon table.



Defining a Site Association

1. On the **View** menu, select **Site Associations**, then click **Site Association**.

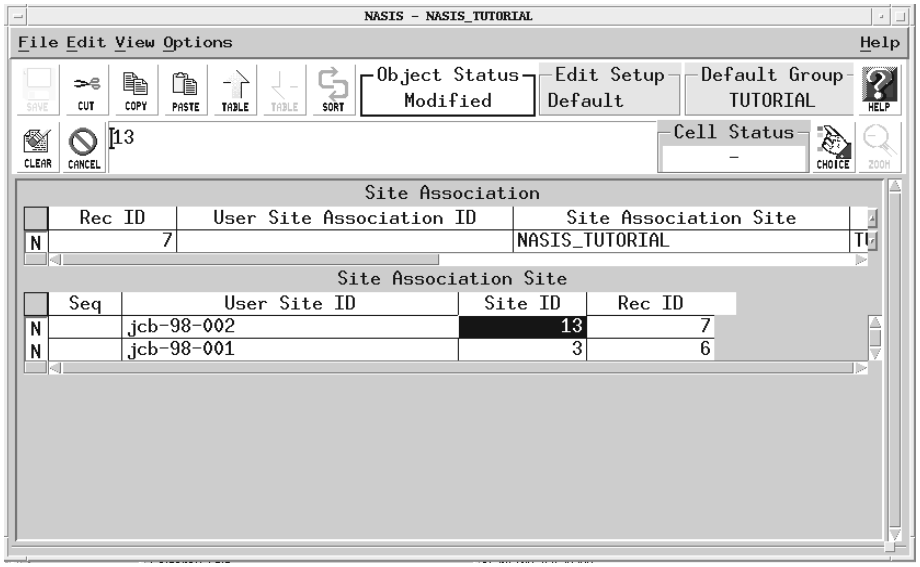


2. Click **F8** to open a row. Enter a User Site Association ID of your choosing.

   Note: By default, the program will assign NASIS_TUTORIAL as the Source Site Association Site and assign a Rec Id.

3. Click **Down Table**. Within the Site Association Site table you will select the individual sites that are members of this Site Association.
4. Click **F8** to open a new row.
5. At the **User Site ID** column, use the choice list to locate User Site Id **jcb-98-001**. Highlight it and click **Apply**.

6. Click **F8** to open a new row.
7. Repeat steps 4 and 5 to add Site ID **jcb-98-002**.



8. Repeat steps 4 and 5 to add User Site ID **jcb-98-003**.

   Note: When finished, three Site Ids should be associated with this Site Association.

9. You have now completed all of the tutorial lessons.